History of Internet Governance

- Global Communication in the Information Society:
  The Role of Internet Policy and Regulation

- University of Tampere

- Tampere
- January 20 – 25, 2011

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The Five Waves of Internet Governance

- Wave 1: Military (1957 – 1970s)
  - DARPA-Net
- Wave 2: Academic (1970s – 1990s)
  - TCP/IP
- Wave 3: Commercial (1990s – 2000)
  - WWW
- Wave 4: Masses (2000 – 2010)
  - WSIS
- Wave 5: Everybody & Everyting (2010+)
  - The New Internet Complexity

Wave 1: Military

- 1957: The Sputnik-Shock
- 1958: NASA & ARPA
- 1969: The first Network: DARPANet
- 1970s: Research, financed by the DOD

Wave 2: Protocols

- 1969: RFC (Steve Crocker)
- 1971: @ (Roy Tomlinson)
- 1974. TCP/IP (Vint Cerf & Bob Kahn)
- 1975: IAB (Dave Clark & Barry Leiner)
- 1982: SMTP (Jon Postel)
- 1985: DNS (Paul Mockapetris & Postel)
- 1986: IETF (Mike Corrigan)
- 1991: HTML (Tim Barners-Lee)
- 1992: ISOC (Cerf, Kahn & Chapin)

Wave 2: The DNS

- Numbers
  - IPv4: 134.35.145.34 (4.3 billion)
  - IPv6: 128 bits long (zillions, nearly endless)
- Names
  - gTLDs/for US: .mil, .gov, .edu, /for the world: .com, .org, .net,
  - ccTLDs: .de, .dk, .in (ISO 3166)
- Root Server
  - Originally 13, today with Anycast more than 100
  - Special role of US government (authorizes the publication of zone files for TLDs in the Hidden Server)
- Management
  - Jon Postel via IANA (1989 ISI contract with USG)
  - NSI (contract with USG)

Wave 3: Concepts

- 1991: World Wide Web by Tim Barners Lee
  - There is the idea that society can run without a hierarchical bureaucratic government being involved in every step, if only we can hit on the right set of rules for peer-peer interaction. Our design of the Internet and the Web is a search for a set of rules which will allow computers to work together in harmony. And our spiritual and social quest is for a set of rules which allow people to work together in harmony
- 1992: Dave Clark at IETF
  - We do not believe in kings, presidents and voting. We believe in rough consensus, factual approach and running code

Wave 3: More Concepts

- 1996: J.P. Barlows Declaration of Cyberindependence
  - Governments of the Industrial world, you weary giants of flesh and steel, I come from cyberspace, the new home of mind. On behalf of the future, I ask you of the past to leave us alone.You are not welcome among us. You have no sovereignty where we gather
- 1998: Lawrence Lessig Code is the Law
  - In Cyberspace we must understand how code regulates...We can build, or architect and code cyberspace to protect values that we believe are fundamental or we can ... allow those values to disappear. There is no middle ground. Code is never found, it is only ever made and only ever made by us.

Wave 3: Vint Cerf

- The question was would it be something that could be rolled out to the rest of the world? We didn´t know for sure but when we worked on it we decided not to patent, not to copyright, not to control but to share everything we knew about the Internet design to the general public all around the world. What is amazing is that it was a US Department of Defence project and we were in the middle of the Cold War. In spite of all that we made all this completely available to everybody and the only reason it was possible is nobody paid any attention to us. (Computerworld, 2/2010)

Wave 3: DNS Governance

- 1989: IANA
  - Jon Postel & Contract with Department of Commerce
- 1994: ISOC
  - 150 new gTLDs (failed)
- 1997: IAHC
  - MoU with ITU, WIPO, INTA, IAB, IANA and ISOC (failed)
- 1998: ICANN
  - Private corporation under Californian Law linked via a MoU to the US Department of Commerce

Wave 3: ICANN

- ICANNs Mandate
  - Root Server
  - Domain Names
  - IP Addresses
- ICANN Structure
  - Board of Directors
  - Supporting Organisations (GNSO, CNSO, ASO)
  - Advisory Committees (GAC, ALAC, RSSAC, SSAC, TLG)
- ICANN Principles
  - Security & Stability
  - Bottom Up PDP
  - Competition
  - Multistakeholder

Wave 4: WSIS Geneva

- The Controversy
  - Oversight over critical Internet resources
  - Role of governments in IG for an Internet with more than one billion users
- The Conflict
  - Governmental Leadership vs. Private Sector Leadership
  - China vs. US
  - ITU vs. ICANN
  - Narrow Definition vs. Broad Definition
- The Compromise
  - Multistakeholder Approach
  - WGIG

Wave 4: WGIG Final Report

- WGIG Recommendations
  - Broad Definition
    - *Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet*.
  - Identification of Public Policy Issues
    - Open List of 18 issues
  - Internet Governance Forum
    - Space for Multistakeholder Discussion
  - No Consensus on Oversight
    - Four Models (from Status Quo Minus to Status Quo++)

Wave 4: US vs. China vs. EU

- US Government: 4 Principles
  - Security & Stability has first priority
  - ICANN is appropriate for technical coordination
  - Sovereignty over national Domain Name Space
  - More Discussion needed
- Chinas Government: Governmental Control
  - National Sovereignty
  - Intergovernmental Mechanism
- The EU Proposal
  - New Cooperation Model
    - Governments for the Level of Principle
    - Private Sector for the day-to-day operations
- The Compromise:
  - US vs. China: Digtal Yalta (?)
  - US vs. Europe: Enhanced Cooperation

Wave 4: WSIS Tunis 2005

- General Principles
  - Multistakeholderism
  - ccTLD Sovereignty
  - Governmental role in public policy issues
  - Equal role of all governments in guaranteeing the stability and security of the Internet
- Internet Governance Forum
  - Multistakeholder discussion platform
  - No decision making capacity
- Process on Enhanced Cooperation
  - No consensus about interpretation
  - Enhanced communication, coordination and collaboration among the involved institutions and organisations (EC^3)

Wave 4: Post Tunis ICANN & UN

- ICANN / US Government
  - Joint Project Agreement (JPA/10/2006) substituted by Affirmation of Commitment (AoC/10/2009)
  - New US Administration (Cyber Czar in the White House)
- IGF
  - 5 IGFs in Athens (October 2006), Rio (November 2007), Hyderabad (December 2008), Sharm el Sheikh (November 2009) and Vilnjus (September 2010)
  - Evaluation by the UNCSTD
- United Nations
  - Report by the UN Secretary General on „Enhnaced Cooperation“
- ITU
  - Plenipotentiory in (11/2006) and Guadalajara/11/2010)
  - ICANN Issues: From ignorance to collaboration on the basis of reciprocity
- WTO/WIPO/ACTA
  - Intellectual Property (Three Strikes)

Wave 4: Post Tunis OECD, EU & COE

- OECD
  - Joint Project Agreement (JPA/10/2006) substituted by Affirmation of Commitment (AoC/10/2009)
  - New US Administration (Cyber Czar in the White House)
- Council of Europe
  - 5 IGFs in Athens (October 2006), Rio (November 2007), Hyderabad (December 2008), Sharm el Sheikh (November 2009) and Vilnjus (September 2010)
- EU
  - From Resolution 102 (Antalya/November 2006) to the
  - ITU Plenipotentiary Conference (Guadalajara/November 2010)

Wave 5: The New Internet Governance Complexity

- The Challenge of Multistakeholderism (vs. One-Stakeholderism)
- Power Shift leads to Innovations in International Law, Diplomacy and Decision Making
- What is the respective role of stakeholders?
  - Role of governments?
- What are the appropriate bodies for political discussions and decision making
  - ICANN, IGF, United Nations, G 7, G 20?
- What are the needed political legal instrument?
  - AoC, LoI, MoU, FoC?

Wave 5: ICANNs 2011 Agenda

- Review under the AoC
  - Decentralized multistakeholder oversight (Board, Competition, Security, Whois)
- Security and Stability of the Internet
  - DNSSec, CERT, eCrime
  - IANA Contract
- New TLDs
  - gTLDs, GEO-TLDs
- iDNs
  - .idn for ccTLDs & .idn for gTLDs
- IPv4 transition to IPv6
  - Last IPv4 adresses in 2012
- Whois Database
  - Access to and use of individual data of registrants
- At Large (ATLAS II?)
  - Voting Rights in the Board & Consumer / User Protection

Wave 5: UN & G 7 2011 Agenda

- IGF & UNCSTD
  - Continuation until 2015
  - WG on IGF Improvement
    - Observatory, Clearinghouse, Laboratory, Scout, School, Early Warning System, Watchdog,
    - Secretary & MAG?
    - Messages or Receommendation?
- Enhanced Cooperation
  - India/Brazil/SouthAfrica: Intergovernmental Platform
  - EC^3
  - 66th UN General Assembly
- WSIS
  - WSIS Forum 2011
  - WSISD III 2015?
- G 7 under the French Presidency / G 20?
  - Cybersecurity (Critical Infrastructure & Cyberwar)

Checkpoint 2015

- Political Environment will have changed
  - Financial Crisis, Globalization, Role of Governments
- Priorities will have changed
  - Cybersecurity, Internet of Things/ONS, RFID, iDNs, Mobile Internet, Net Neutrality etc.)
- ICANN:
  - Multistakeholder Model?
  - Review as accepted Oversight mechanism?
- IGF:
  - Improvement?
  - Renewal?
- United Nations
  - Enhanced Cooperation?
  - Internet Security, Human Rights & Intellectual Property (WIPO/WTO/ACTA)
- G 7/ G 20
  - Cyberescurity / Cyberwar

Looking Ahead: 2020

- 5 billion Internet Users
- Multilingual Internet
- All Kinds of converged services (Web 3.0)
- Multistakeholder Governance (Tower of Triangles)
- Internet of Things
- Beyond DNS?

- Network: Unification vs. Fragmentation
- PDP: Top Down vs. Bottom Up
- Management: Multistakeholder Self-Organisation vs. Governmental & Commercial Control

- But whatever happens, one thing is for sure:
- Internet Governance will remain the subject of high level political controversy and it will be about
- Power & Money